

**Amendments to the Claims**

Please amend Claims 1-5, 16-18, and 21-22; and cancel Claims 6-15, 19-20, and 23-30, as follows.

1. (Currently Amended) A method for processing a collection of tree data structures in a computer-readable database, the method comprising:

identifying a plurality of disjoint sets of trees in the collection of tree data structures, each tree in the respective set of trees having a same structure and including at least one leaf node having a value:

for each of the plurality of disjoint sets of trees, forming a pattern having the same structure as each tree in the set of trees thereby generating a set of patterns;

storing the set of patterns in a computer-readable memory in lieu of storing the plurality of sets of trees corresponding to each pattern;

storing the at least one leaf node of each tree of each of the sets of trees in a computer-readable memory;

associating each pattern in the set of patterns with the at least one leaf node of each tree in the set of trees corresponding to the pattern; and

processing the set of patterns with distributed processors, wherein each distributed processor processing one or more of the patterns in the set of patterns.

2. (Currently Amended) The method of Claim 1 wherein the set of patterns is processed in lieu of processing each tree in the plurality of disjoint sets of trees.

3. (Currently Amended) The method of Claim 1 wherein processing the set of patterns comprises applying a query tree to at least a portion of the set of patterns.

4. (Currently Amended) The method of Claim 1 wherein processing the set of patterns comprises applying an extend operation to at least a portion of the set of patterns.

5. (Currently Amended) The method of Claim 1 wherein processing the set of patterns comprises applying an intersect operation to at least a portion of the set of patterns.

6-15. (Cancelled)

16. (Currently Amended) A system for processing a collection of tree data structures, the system comprising:

a database component operative to maintain a database comprising the collection of tree data structures;

a processing component communicatively connected to the database component, the processing component programmed to perform actions comprising:

identifying, by communicating with the database component, a plurality of disjoint sets of trees in the collection of tree data structures, each tree in the respective set of trees having a same structure and including at least one leaf node having a value;

for each of the plurality of disjoint sets of trees, forming a pattern having the same structure as each tree in the set of trees thereby generating a set of patterns;

storing the set of patterns in a communicatively connected computer-readable memory in lieu of storing the plurality of sets of trees corresponding to each pattern;

storing the at least one leaf node of each tree of each of the sets of trees in the computer-readable memory;

associating each pattern in the set of patterns with the at least one leaf node of each tree in the set of trees corresponding to the pattern;

and

processing the set of patterns with distributed processors, wherein each distributed processor processing one or more of the patterns in the set of patterns.

17. (Currently Amended) The system of Claim 16 wherein the processing component processes the set of patterns in lieu of processing each tree in the plurality of disjoint sets of trees.

18. (Currently Amended) The system of Claim 16 further comprising:  
an input component communicatively connected to the processing component,  
wherein the processing component is programmed to perform actions further comprising:

receiving information from the input component; and  
generating a query tree based upon the received information,  
wherein processing the set of patterns by the processing component comprises applying the query tree to at least a portion of the set of patterns.

19. (Cancelled)

20. (Cancelled)

21. (Currently Amended) The system of Claim 16 wherein processing the set of patterns comprises applying an extend operation to at least a portion of the set of patterns.

22. (Currently Amended) The system of Claim 16 wherein processing the set of patterns comprises applying an intersect operation to at least a portion of the set of patterns.

23-30. (Cancelled)